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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|-------------------------------------|---------------------------|------------------|
| 10/506,287 | 08/31/2004 | Henricus Marinus Josephus Hikspoors | NL 020186 | 6744 |
| 24737 | 7590 | 02/03/2006 | EXAMINER | |
| PHILIPS INTELLECTUAL PROPERTY & STANDARDS | | | CHOWDHURY, TARIFUR RASHID | |
| P.O. BOX 3001 | | | ART UNIT | PAPER NUMBER |
| BRIARCLIFF MANOR, NY 10510 | | | 2871 | |

DATE MAILED: 02/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/506,287 | HIKSPOORS ET AL. | |
| | Examiner | Art Unit | |
| | Tarifur R. Chowdhury | 2871 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-10 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 31 August 2004 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 08/24/05.
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____.

DETAILED ACTION

Specification

1. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a).
"Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Objections

2. Claim 9 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claim 9 depends from claim 1 and claim 1 already recites what is recited in claim 9 and thus claim 9 fails to further limit the subject matter of claim 1.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

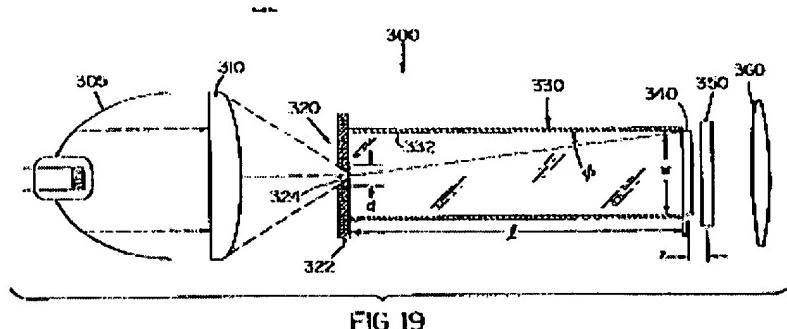
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. **Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Swanson et al., (Swanson), USPAT 5,889,567 in view of Weber et al., (Weber), USPAT 6,025,897 and Moon et al., (Moon), USPAT 6,882,386.**

6. Swanson discloses and shows in Fig. 19, a projection device for projecting an image comprising a light source (305) for emitting light, a transmissive LCD projection subsystem and a projection means (360) for projecting the image, the projection subsystem comprising:

- a waveguide integrator (330) for guiding light from an entrance to an exit, the inner entrance surface of the integrator being coated with a reflective material (322) and having a hole (324) for coupling light emitted from the light source into the integrator; and



- a transmissive LCD (350) provided at the exit side of the integrator.

Swanson differs from the claimed invention because he does not explicitly disclose the claimed reflective polarizer at the exit surface of the integrator.

Weber discloses a display device having a reflective polarizer (12) disposed between an LCD (18) and at the exit surface of the integrator (24) (Fig. 1). He further

discloses that such an structure is advantageous since it develop adequate brightness and contrast under both ambient and backlight illumination (col. 1, lines 61-63).

Weber is evidence that ordinary workers in the art would find a reason, suggestion or motivation to employ a reflective polarizer between an LCD and the exit surface of an integrator.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the projection device of Swanson by employing a reflective polarizer between the LCD (350) and the exit surface of the integrator so that adequate brightness and contrast can be obtained under both ambient and backlight condition, as per the teachings of Weber.

Still lacking is the limitation such as the LCD is integrated with a reflective color filter array.

Moon discloses a display device wherein an LCD integrated with a reflective color filter (12) made of cholesteric liquid crystal polymer (applicant's reflective color filter array) is provided at the exit surface of a light guide (40) (applicant's waveguide integrator) (Fig. 1). He further discloses that by employing a cholesteric color filter in an LCD device the luminance can be improved (col. 2, lines 5-7).

Moon is evidence that ordinary workers in the art would find a reason, suggestion or motivation to employ a reflective color filter array in an LCD device.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the projection device of Swanson when

modified by Weber by employing a reflective color filter array in the LCD to improve luminance.

Accordingly, claims 1, 2 and 4 would have been obvious.

As to claims 3 and 7, it is clear from Fig. 1 of Moon that the reflective color filter array having a diagonal configuration and is located at the inner surface of one of the substrates of the LCD and between the polarizer and the LCD.

As to claim 5, Swanson shows in Fig. 19 that the waveguide integrator further comprises retardation film (340) for changing the polarization of the polarized light back into the integrator.

As to claim 6, making the surface of the LCD outside the visible window reflective to obtain a reflective LCD is common and known in the art and thus would have been obvious.

As to claim 8, Swanson also discloses that the integrator (330) is made of higher refractive index material for reflecting light (col. 18, lines 5-7).

As to claim 10, the method of projecting an image merely discloses the steps of forming the projection device and since each element must be formed to make the device, the method would have at least been obvious in view of the device.

Conclusion

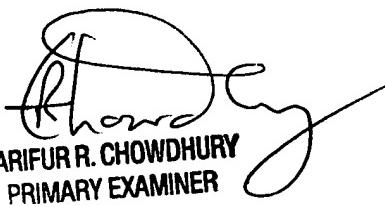
7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tarifur R. Chowdhury whose telephone number is (571) 272-2287. The examiner can normally be reached on M-Th (6:30-5:00) Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on (571) 272-2293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TRC
January 31, 2006



TARIFUR R. CHOWDHURY
PRIMARY EXAMINER